

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A chip-stack semiconductor device, comprising:
multiple semiconductor chips vertically stacked on top of each other, wherein:
each of the semiconductor chips includes electrode pads, and
multiple through electrodes formed in a region within the ~~connected to each other in~~
~~regions inside of electrode pads derived from a device region, each of the through electrodes~~
~~linking a front surface to a back surface of the semiconductor chip.~~

2. (Currently amended) The chip-stack semiconductor device as set forth in claim 1,
wherein for at least one semiconductor chip the electrode pads are provided along a periphery of
the semiconductor chip so as to surround the device region.

3. (Original) The chip-stack semiconductor device as set forth in claim 1, wherein at least
one type of the through electrodes is contact through electrodes electrically connected to the
electrode pad.

4. (Original) The chip-stack semiconductor device as set forth in claim 2, wherein at least
one type of the through electrodes is contact through electrodes electrically connected to the
electrode pad.

5. (Original) The chip-stack semiconductor device as set forth in claim 1, wherein at least one type of the through electrodes is non-contact through electrodes not electrically connected to the electrode pad.

6. (Original) The chip-stack semiconductor device as set forth in claim 2, wherein at least one type of the through electrodes is non-contact through electrodes not electrically connected to the electrode pad.

7. (Original) The chip-stack semiconductor device as set forth in claim 1, wherein a through electrode is further provided in regions outside of the electrode pad.

8. (Original) The chip-stack semiconductor device as set forth in claim 2, wherein a through electrode is further provided in regions outside of the electrode pad.

9. (Original) The chip-stack semiconductor device as set forth in claim 1, wherein the through electrodes in the semiconductor chips are connected to each other via bumps so that the semiconductor chips are vertically stacked on top of each other.

10. (Original) The chip-stack semiconductor device as set forth in claim 2, wherein the through electrodes in the semiconductor chips are connected to each other via bumps so that the semiconductor chips are vertically stacked on top of each other.

11-18. (Canceled)

19. (New) The chip-stack semiconductor device of claim 1, wherein the electrode pads are electrically connected with a device region of the semiconductor chip.

20. (New) A chip-stack semiconductor device, comprising:
multiple semiconductor chips vertically stacked on top of each other, and at least first and second electrode pads provided on at least one of the semiconductor chips wherein:
each of the semiconductor chips includes multiple through electrodes connected to each other in regions inside of electrode pads, each of the through electrodes linking a front surface to a back surface of the semiconductor chip; and
wherein a plurality of different through electrodes are provided in the first electrode pad, so that when viewed from above the plurality of through electrodes are located inside a periphery of the first electrode pad.

21. (New) The device of claim 20, wherein of the plurality of different through electrodes provided in the first electrode pad, first and second of these different through electrodes carry different signals.

22. (New) The device of claim 20, wherein of the plurality of different through electrodes provided in the first electrode pad, first and second of these different through electrodes carry different signals and extend to different depths in the semiconductor device.